Watershed Analysis Stray Creek

Existing Condition

Yakus Creek is a 7900 acre, seventh level mixed ownership watershed, 66% of Yakus is managed by the US Forest Service and the remaining acres near the confluence of Yakus and Lolo Creek are on state and private lands (Figure 1).

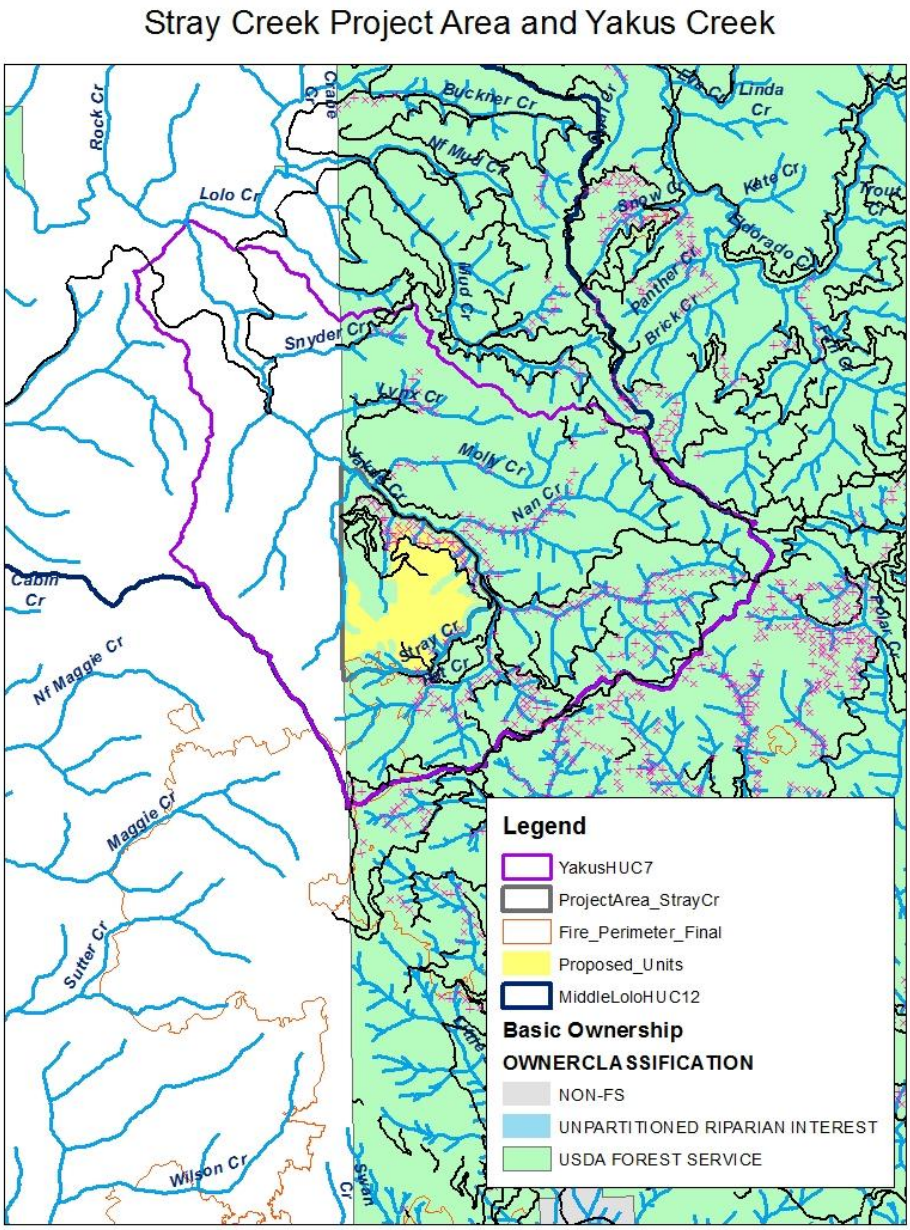

Figure 1. Stray Creek is tributary to Yakus Creek within the Middle Lolo Subwatershed

Aquatic habitat surveys were conducted in the mainstem of Yakus Creek in 1997 (Clearwater Biostudies, Inc. 1998). In surveys in the late 1990's, Yakus Creek was meeting Forest Plan standards for sediment (Jones and Murphy 1997). However, cobble embeddedness was 45% when measured at the Forest boundary in 2016, which exceeds Forest Plan Standards for Yakus Creek. Field surveys conducted by Idaho DEQ, found water quality to good in all the perennial streams of the Middle Lolo subwatershed with the tributaries including Yakus fully supporting all beneficial uses.

The existing condition in Yakus Creek reflects both ongoing impacts of legacy management activities and recent natural events. Ongoing legacy impacts include past harvests, grazing, and the road system built to support those activities. The road system built to support timber harvests from the 1950's to the present continue to impact Yakus Creek and the streams in the Middle Lolo Drainage. The older, non-system roads in the Yakus, Mud, Stray and other smaller watersheds were an early focus of the Forest's and Nez Perce Tribe's watershed restoration efforts, reducing road densities and impacts from roads to stream channels over the last 20 years. The benefits of decommissioning will continue to be realized as the restored areas revegetate and recover. However, impacts from higher densities of existing roads remain, particular the high use roads with numerous stream crossings near the channel itself.

Erosion from the existing the road system increased as a response to natural, but extreme precipitation events. During the winters/early springs of the last five years the Lolo Creek Drainage experienced hydrologic events called rain-on-snow events. During these high precipitation events, early spring warming changes precipitation from snow to rain and causes rapid snowmelt. The combination of precipitation and rapidly melting snowpack creates high runoff that exceeds the ability of the ground to absorb the water and exceeds the ability of drainage structures to contain the runoff. Road failures occur where water overtops culverts and diverts down gullies and ruts on the road prism often connecting to live water and resulting in direct sedimentation into waterways. Road sedimentation during high precipitation events is particularly common among the native surface roads that do not receive regular maintenance like many of those in Yakus Creek. Beyond the hydrologic events and road failures, Yakus Creek continues to flush sediment from the increased erosion and flows resulting from the 2015 fire season. The Woodrat Fire burned into the Rat and Stray Creek watersheds within Yakus Creek watershed. The Woodrat Fire area continues to recover but in the initial years after the fire erosion from burned areas was high and the levels of sediment deposited into the streams will continue to flush in pulses through the channel systems for years after the initial fire.